

Application No.: 09/763,515

Docket No.: 21900-00021-US

AMENDMENTS TO THE CLAIMS

Claims 1-9. (Canceled)

10. (Currently amended) A security thread comprising:

a core member having a fiber made of a soft magnetic material having permeability of 1000 or more, or a core member having a fiber made of a soft magnetic material having permeability of 1000 or more and a core thread; and

a cover member made of a nonmetal material to cover said core member.

11. (Currently amended) A security thread comprising:

a core member having a fiber made of a soft magnetic material having permeability of 1000 or more, or a core member having a fiber made of a soft magnetic material having permeability of 1000 or more and a core thread;

a member disposed to be in contact with said core member and made of a semi-hard magnetic material which can deactivate the magnetic characteristic of the soft magnetic material; and

a cover member made of a nonmetal material to cover said core member and said member made of said semi-hard magnetic material.

12. (Currently amended) A security thread comprising:

a core member having a fiber made of a soft magnetic material having permeability of 1000 or more, or a core member having a fiber made of a soft magnetic material having permeability of 1000 or more and a core thread;

a thermal welding thread disposed to be in contact with said core member; and

a cover member made of a nonmetal material to cover said core member and said thermal welding thread.

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13. (Currently amended) A security thread comprising:

a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse, or a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse and a core thread;
and

a cover member made of a nonmetal material to cover said core member.

14. (Currently amended) A security thread comprising:

a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse, or a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse and a core thread;

a member disposed to be in contact with said core member and made of a semi-hard magnetic material which can deactivate the magnetic characteristic of the soft magnetic material;
and

a cover member made of a nonmetal material to cover said core member and said member made of said semi-hard magnetic material.

15. (Currently amended) A security thread comprising:

a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse, or a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse and a core thread;

a thermal welding thread disposed to be in contact with said core member; and

a cover member made of a nonmetal material to cover said core member and said thermal welding thread.

16. (Previously presented) The security thread according to any one of claims 10 to 15 wherein said soft magnetic material is made of an amorphous metal.

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17. (Previously presented) The security thread according to claim 16, wherein said amorphous metal is mainly made of Co-Fe-Si-B.

18. (Previously presented) The security thread according to any one of claims 10 to 15 wherein said soft magnetic material is made of an amorphous metal ribbon.

19. (Previously presented) The security thread according to claim 18, wherein said amorphous metal ribbon is mainly made of Co-Fe-Si-B.

20. (Previously presented) The security thread according to any one of claims 10 to 15 wherein said soft magnetic material is made of a Permalloy.

21. (Previously presented) The security thread according to any one of claims 10 to 15 wherein said soft magnetic material is made of an Fe-Si based alloy.

22. (Currently amended) A manufacturing method of a security thread comprising the steps of:

preparing a core member having a fiber made of a soft magnetic material having permeability of 1000 or more, or a core member having a fiber made of a soft magnetic material having permeability of 1000 or more and a core thread; and

covering a periphery of said core member by a cover member made of a nonmetal material.

23. (Currently amended) A manufacturing method of a security thread comprising the steps of:

preparing a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse, or a core member having a fiber made of a soft magnetic material indicating a magnetic

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characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse and a core thread; and

covering a periphery of said core member by a cover member made of a nonmetal material.

24. (Currently amended) A manufacturing method of a security thread comprising the steps of:

preparing a core member having a fiber made of a soft magnetic material having permeability of 1000 or more, or a core member having a fiber made of a soft magnetic material having permeability of 1000 or more and a core thread;

disposing a member to be in contact with said core member and made of a semi-hard magnetic material which can deactivate the magnetic characteristic of the soft magnetic material; and

covering a periphery of said core member and said member made of said semi-hard magnetic material by a cover member made of a nonmetal material.

25. (Currently amended) A manufacturing method of a security thread comprising the steps of:

preparing a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse, or a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse and a core thread;

disposing a member to be in contact with said core member and made of a semi-hard magnetic material which can deactivate the magnetic characteristic of the soft magnetic material; and

covering a periphery of said core member and said member made of said semi-hard magnetic material by a cover member made of a nonmetal material.

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26. (Currently amended) A manufacturing method of a security thread comprising the steps of:

preparing a core member having fiber made of a soft magnetic material material permeability of 1000 or more, or a core member having a fiber made of a soft magnetic material having permeability of 1000 or more and a core thread;

disposing a thermal welding thread to be in contact with said core member; and

covering a periphery of said core member and said thermal welding thread by a cover member made of a nonmetal material.

27. (Currently amended) A manufacturing method of a security thread comprising the steps of:

preparing a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse, or a core member having a fiber made of a soft magnetic material indicating a magnetic characteristic with a large Barkhausen discontinuity to rapidly cause magnetization reverse and a core thread;

disposing a thermal welding thread to be in contact with said core member; and

covering a periphery of said core member and said thermal welding thread by a cover member made of a nonmetal material.